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Subject: OW Management Report for Hurricane Harvey and Hurricane Irma for September 15, 2017
Date: Friday, September 15, 2017 3:52:21 PM
Attachments: OW Management Report Harvey Irma 9152017.docx

Attached and pasted below is the OW Management Report for Hurricane Harvey and Hurricane Irma for 9/15/2017.

Have a good weekend!

Kevin Tingley
EOC Water Desk

Hurricane Harvey Update (note: Hurricane Irma report starts on page 4)

Background:

Response and recovery efforts continue throughout the Gulf Coast of TX and LA. Rivers continue to recede in the region, however major record levels will persist through this week for several areas, including Houston and Beaumont.

Federal Activities:

FEMA has activated the NRCC at Level 1 with all Emergency Support Functions (ESFs) and deployed national and several regional Incident Management Assistance Teams (IMATs). FEMA's Region 6 RRCC is also at Level 1.

State Activities:

The TX SEOC remains at full activation, while the LA SEOC remains at Level III (24 hours).

EPA HQ:

Water Desk Staffing for the coming week is as follows:

Friday 9/15: Kevin Tingley
Saturday 9/16: Brian Pickard
Sunday 9/17: David Goldbloom-Helzner
Monday 9/18: Kevin Tingley
Tuesday 9/19 – Wednesday 9/20: Rich Weisman
Thursday 9/21: Kevin Tingley

EPA Activities: Region 6:

Recovery Activities: The Governor of Texas sent a letter to Administrator Pruitt on September 8 about the use of State Revolving Funds (SRF) to fund immediate recovery and resilience efforts for the water, wastewater and stormwater infrastructure in Texas. The National Disaster Recover Framework (NDRF) has been activated. Also, Region 6 staff have been deployed to the Joint Field Office in Austin to address recovery of water and wastewater infrastructure and other recovery support functions.

EPA Region 6 responded to a September 1, 2017 letter from the Texas Water Development Board (TWDB) requesting flexibility in the use of State Revolving Fund (SRF) resources to address immediate recovery and future resiliency efforts. TWDB and EPA's Office of Water met on September 11, 2017 regarding SRF funding to address impacts. EPA Region 6 Acting RA responded on September 12, 2017, supporting flexibilities in the SRF program and committing to expedited reviews. A follow-up meeting was scheduled at the JFO September 13, 2017, with TWDB and FEMA public assistance to discuss SRF interim/bridge funding to impacted communities.

EPA provided by letter to the Texas Water Development Board about flexibility in using the State Revolving Loan Fund to address recovery and resiliency efforts. The NEPA review requirements may be required for final project approval and streamlining opportunities are being reviewed.

Private Domestic Drinking Water Wells Sampling Under ESF-8: EPA continues to make contact with the remaining 18 counties regarding private water well testing and our research indicates that private well testing is available across the state for a nominal fee. EPA has confirmed 21 of the 39 disaster declaration counties are currently providing private well testing for area residents. The Texas Department of State Health Services also offers bacteria testing for \$28 through the state lab. The Texas Commission on Environmental Quality (TCEQ) website provides public information and a list of NELAP Accredited Labs for well owners to analyze water samples for a fee.

Drinking Water / Wastewater Assessments

Drinking water and wastewater assessment teams completed their emergency assessments of community water systems and will demobilize today, September 15, 2017. Of the 2,022 systems designated for follow up, EPA's collaborative work with the state has ensured the return of 1,945 community water systems to fully operational status. These systems cover 99% of the population in the greater Houston area (7.23 out of 7.26 million served). The remaining system restorations and lifting of boil water notices oversight will be transitioned to the TCEQ regional offices.

The 3 tables below show the status of DW systems and the DW/WW assessments as of September 14, 2017.

Drinking Water and Waste Water Assessments (September 14, 2017)		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	51	625
On-Site WW Assessments	39	441
Phone DW Assessments	300	6754
Phone WW Assessments	27	4639

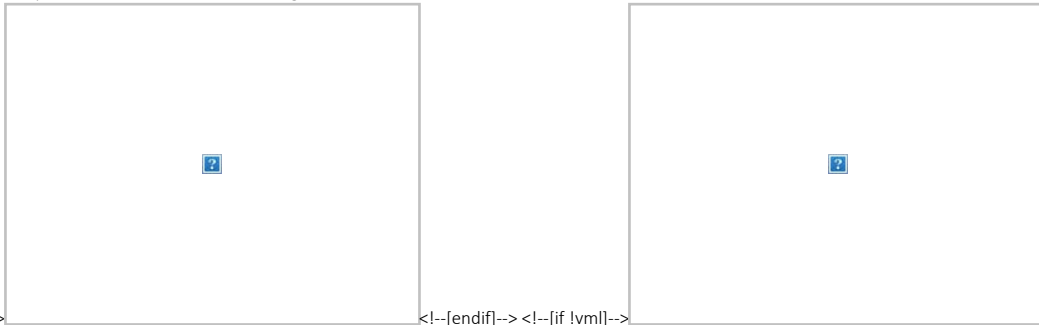
Drinking Water: From TCEQ website as of 9/14/17. Updated information highlighted.

	Number of Drinking Water Systems	Population
Fully Operational	2,109	NA
Boil Water Notices	69	48,693
Shutdown	16	6,067
Awaiting update	101	NA

Wastewater and Sewage: From TCEQ website as of 9/14/17.

	Number of Wastewater Treatment Plants
Fully Operational	1,619
Inoperable	14
Operating with Issues	58

Below are two maps that show the status of drinking water and wastewater facilities in the affected areas.



Hurricane Irma Update

Background:

Post-Tropical Cyclone Irma lost its tropical characteristics and is now a Post-Tropical depression as it moves over the Tennessee Valley. Significant river flooding continues across the northern and western portions of the Florida Peninsula. Many basins have already crested with gradual recession expected for the next several days; however, slower responding basins will most likely crest either Thursday or Friday. Flood impacts likely to homes, business, and state county roads, especially in areas exceeding major flood stage. Most locations across the entire region should recede below Major Flood Stage by this Tuesday, 19 September.

Local/State Activities:

Puerto Rico and U.S. Virgin Islands

The Puerto Rico (PR) Emergency Operations Center and U.S. Virgin Islands (USVI) Territorial Emergency Management Agency (EMA) are at Full Activation. The respective Governors have declared states of emergency. The PR National Guard and USVI National Guard have been activated.

Florida

Florida is currently operating at their highest level of activation - Level 1, with the State Emergency Operations Center (SEOC) staffed by Division of Emergency Management personnel and all Emergency Support Functions. The EPA Region 4 continues to staff the SEOC in Tallahassee, Florida.

Georgia

The Georgia SEOC is currently operating at a Level 1 (full activation and fully staffed) activation. A State of Emergency remains in effect for all 159 counties.

Federal Activities:

FEMA Region II:

- Regional Response Coordination Center (RRCC) at Level I (Full Activation) day shift, Level II (Partial Activation) night shift with ESFs 3 and 15
- FEMA Region II IMAT in St. Croix, USVI
- FEMA Region X IMAT in PR
- U.S. Virgin Islands:
 - o EOC at Full Activation, state of emergency declared, and National Guard activated
 - o Planning to establish JFO at the University of the Virgin Islands St. Thomas campus
- Puerto Rico: EOC at Level IV (Full Activation); state of emergency declared, and National Guard activated

FEMA Region IV:

- RRCC at Level I (Full Activation)
- HQ National Tribal Affairs Advisor on site at RIV RRCC supporting communications to four tribes outside of FL affected by Irma
- Region IV IMAT-1 at FL EOC and Region IV IMAT-2 at GA EOC
- Region IV Liaison Officers (LNOs) at FL, SC, GA, AL, and Seminole Tribe EOCs (1 each); LNO at NC has returned to Region IV
- Florida
 - o EOC at Level I (Full Activation)
 - o State of Emergency declared for 67 counties
 - o FEMA Initial Operating Facility (IOF) operational in Tallahassee
 - o Miccosukee Tribe: Two EOCs at Full Activation; shelters remain open with an unknown population; FEMA awaiting permission to perform damage assessments and assist with recovery efforts on tribal lands
- Seminole Tribe of Florida:
 - o EOC at Full Activation (24/7, all ESFs)
 - o FEMA Tribal LNO, Operations, Logistics, and Communications teams on-site; ETA for Planner no later than September 15
 - o FEMA Tribal Agreement for Emergency Declaration signed on September 14, 2017; DR request pending
- Alabama: EOC at Level III (Partial Activation)
- Georgia: EOC at Level I (Full Activation)
- Mississippi: EOC at Level III (Partial Activation)
- North Carolina: EOC at Level V (Normal Operations)
- South Carolina: EOC at OPCON V (Normal Operations); Preliminary Damage Assessments (PDAs) pending for 15 Counties (PA).
- Tennessee: EOC at Level IV (Monitoring)

EPA Activities:

Region 2:

Region 2 currently has 8 FEMA MA for pre-deployment planning, implementation, and deployment of personnel for damage assessments on St. Thomas, St. Croix and St. John in the USVI, and PR, including the islands of Vieques and Culebra. In PR, EPA continues to assist the local water and health departments in prioritizing drinking water facilities needs for Federal assistance. Two EPA teams are in PR conducting such assessments.

Region 4:

The EPA Region 4 Water Protection Division (WPD) received funding totaling \$75,000 under an ESF-3 MA sub-task to support the U.S. Army Corps of Engineers (USACE) drinking water and wastewater facility assessments. The WPD continues to coordinate with the Florida Department of Environmental Protection (FDEP) and the USACE. More information is below under 'Drinking Water and Wastewater System Status – Florida'

USEPA Region 4 Science and Ecological Support Divisions (SESD) Mobile Laboratory remains prepared to conduct the following analyses for drinking water if assistance is needed by Region 4 States. Analysis includes total coliform, E. coli, fecal coliform, and enterococcus. Contact has been made with the Seminole and Miccosukee Tribes in South Florida and EPA drinking water support and response capabilities were discussed.

Drinking Water and Wastewater System Status:

Region 2:

Puerto Rico Drinking Water Status: PRASA is back to normal operations in providing drinking water services to the population. This does not include the non-PRASA systems which account for 4% of the PR population but as explained below non-PRASA systems have not suffered serious damages.

PRASA: All PRASA waste water treatment plants are in service. CEPD continued inspections of Sanitary Pump Stations in PRASA's North Region on 9/14/2017 and the Culebra WWTP. Inspections performed indicated that there are no major issues at the facilities. The only remaining inspections are 5 pump stations in PRASA's East Region that will be conducted on 9/15/2017 and the Vieques WWTP which will be done next Tuesday.

PREPA: 99% of population with power expected by Friday.

PREPA: All PREPA waste water treatment plants are in service.

Non-PRASA Drinking Water Status: CEPD and PRDOH contacted most of the non-PRASA systems between Tuesday and Wednesday. No major problems found. The systems without service were due to the lack of primary power. CEPD believes that there is no need to conduct assessments at the non-PRASA systems since there are no major problems encountered.

USVI Drinking Water Status: On 9/11/2017 VIVAPA started operating the Reverse Osmosis plant in St. Thomas for WAPA distribution. WAPA previously used desalination but has switched to RO, run by Seven Seas. Mr. Mark working to get the updated status of the entire system (distribution) etc. Boil water notice was issued for Saint Thomas and Saint John. Chlorination system is up and running. CEPD just requested assistance from the OSCs stationed in Saint Thomas to conduct assessments of drinking water providers. CEPD staff is available upon request to help conducting assessments.

USVI Wastewater: According to a report provided by Waste Management Authority, 6 of the 8 municipal wastewater treatment plants are in service. The only facility not in service is Vessup in Saint Thomas and the assessment of the George Simmonds WWTP has not been completed due to lack of access. In addition, WMA indicated that 4 of the 15 sanitary pump stations in Saint Thomas and Saint John are not in service. During a conversation held with DPNR on 9/12/2017, DPNR stated that they will request assistance from EPA to conduct assessments at the TPDES facilities in Saint Thomas and Saint John. On 9/13/2017, CEPD requested the OSCs deployed in St. Thomas to assess the wastewater treatment plants and pump stations in Saint Thomas and Saint John. CEPD staff is available upon request to help conducting assessments.

Region 4:

Florida:

Water Team Deployment Water team is co-located with and assisting USACE ESF-3 and FL with refining data in the state's Storm Tracker system which tracks the operational status of drinking water and wastewater systems. Storm Tracker is populated by facilities themselves and as such may contain erroneous, misleading or incomplete information which is interpreted and processed by the ESF-3 desk. The team is also coordinating efforts with Florida Water/Wastewater Agency Response Network (Fla WARN) to clarify incomplete requests for resources. A process has been established to insure that each water and wastewater systems' operational status is accurately reflected in Storm Tracker and the specific system needs are correctly entered into Fla WARN. The Water team has divided up the number of water and wastewater systems having a status of "unknown" in Storm Tracker and prioritized the need to contact them by phone based on population served or design capacity. If three attempts to contact a system are unsuccessful the system is referred to FDEP to request their District Office or Approved County Public Health Unit confirm their operational status. If that effort is unsuccessful the system is referred to the Florida Rural Water Association (FRWA) to have a circuit rider place eyes on the system and report back the status. The Water Team will be working on their assigned

counties and updating FDEP who will in turn update the information in Fla WARN and Storm Tracker. The team will continue to assist with data management, taking and making telephone calls to facilities, and other assignments in support of USACE ESF-3 and the State of Florida.

Boil Water Notices (BWN) Boil water notice and/or advisories can be put in place by the drinking water systems themselves, or by the Florida Department of Environmental Protection/Florida Department of Health (FLDEP/FDOH). Florida Department of Health website (<http://www.floridahealth.gov/environmentalhealth/drinking-water/boil-water-notices.html>) publishes a listing of BWN, compiled from multiple sources, including press reports, utility data, and information from local authorities. To date, the site lists 173 BWN issued since 09/11/2017, of which 5 have been rescinded. Due to multiple information collection and reporting sources there is a discrepancy between the FDOH BWN web site and what is being reported through Storm Tracker. Water personnel at the State EOC are coordinating with FLDEP to reconcile BWN reporting in future Sit Reps.

Georgia:

Boil Water Notices (BWN) R4 Water received BWN information from Georgia late on the afternoon of 14SEPT2017. Thirty-five (35) community water systems are currently on boil water notices with twenty-two (22) community water systems reporting loss of pressure or being without power.

Federally Recognized Tribes:

SEMINOLE TRIBE OF FLORIDA (STOF)

STOF is executing their Emergency Fuel Plan that is used to keep their critical infrastructure powered (includes drinking water treatment).

• MICCOSUKEE TRIBE

No significant updates reported.

• POARCH CREEK TRIBE

No significant updates reported.

• EASTERN BAND OF CHEROKEE INDIANS

No significant updates reported.

Water and Wastewater System Assessments: Water and wastewater facilities continue to submit their requests for assistance. The WPD compiled a status of community drinking water systems (CWS) and POTW that may be used during post storm damage assessment in Florida (see the two tables below).

**Total Number of Community Drinking Water Systems (CWS) and
Total Population Served in Florida (9/15/2017)**

Status	Large CWS (Over 3,300)		Small CWS (under 3,300)	
	# Systems	Population Served	# Systems	Population Served
Operational	363	18,485,622	646	466,050
Partially Operational	18	652,063	23	25,611
Non Operational	1	30,545	148	31,703
Unknown	14	117,264	428	187,339
Totals	396	19,285,494	1,245	710,703
Boil Water Notices	41	2,491,030	185	86,662

Operational: Facility producing safe*** drinking water for greater than 90% of customers under normal operating conditions.

Partially Operational: Facility producing safe*** drinking water under adverse conditions and/or supplying less than 90% of customers.

Non Operational: Facility not producing or supplying safe*** drinking water.

Unknown: Status of facility unknown at this time.

** Safe Drinking Water is defined as water that satisfies all State & Federal requirements.

**Total Number of Publicly Owned Treatment
Works (POTWs) All Florida Counties* (9/15/2017)**

Status	NPDES Permitted Facilities		State Permits (Non-NPDES)
	POTW	Non-POTW (Industrial)	
Operational	113	140	592
Partially Operational	6	2	58
Non Operational	0	4	160
Unknown	25	97	1,211
Totals	144	243	2,021

*NPDES universe is subset of total inventory of NPDES permitted systems designed by Florida as the most critical facilities for operational status determination following a hurricane event.

Operational: Facility & associated collection system is properly conveying, and effectively providing wastewater treatment, in accordance with applicable permit conditions and regulations. (Operating on full or backup generator power)

Partially Operational: Facility and/or associated collection system is properly conveying and providing wastewater treatment at a compromised capacity, i.e. one or more treatment train components are non-operational, one or more lift stations are non-operational, etc.

Non Operational: Facility and/or associated collection system is not providing wastewater treatment in accordance with applicable permit conditions and regulations

Unknown: Status of facility unknown at this time